REMARKS

The above amendments and the following remarks are fully and completely responsive to the Office Action dated December 14, 2004.

Claims 1-7 are pending. Claims 1-7 are rejected. Claims 1 and 2 have been amended. No new matter is added. All claims are fully supported by at least the Specification.

The Office Action asserts that "Applicant's amendment necessitates the new ground(s) of rejection presented in [the] Office Action," and for this reason, designated the Office Action as "Final." Applicants do not understand why Applicants' amendments necessitated a new search including a library structure search. As such, a search could have been conducted previously, and was not necessitated by Applicants' amendments. Applicants respectfully request withdrawal of the finality of the outstanding rejection.

Claims 1 is rejected under 35 USC 102(b) as being anticipated by Pucciariello, *J of Appl. Pol. Sc.*, Vol.64, 407-409 (1997) ("Pucciariello"). Applicants respectfully traverse the anticipation rejection.

Applicants note that the present invention provides a fluorinated polymer usable for LAN cables preparation having improved extrusion rate combined with improved electric insulation. *See*, the Specification, page 2 lines 4-7.

Applicants submit that amended claim 1 obviates the anticipation rejection, and is therefore allowable.

Applicants further note that Office Action acknowledges that Pucciariello is silent about the melt flow index (MFI). Applicants submit that the products of the present

invention 1) are not thermoprocessable and 2) do not inherently possess properties similar to those disclosed by the reference simply because the reference recites (a) an identical dipolymer composition and (b) using the same or similar type of polymerization process.

With respect to point 1 above, Applicants note that Figures 1 and 2 of Pucciariello refer to thermal analysis performed by a differential scanning calorimeter (DSC) on only 10 ± 0.5 mg samples. *See*, Pucciariello, page 407, last paragraph. The DSC data referring to 10 mg samples, however, does not provide any information about the melt processability of the product, i.e., the melt moulding or melt extruding properties. Applicants point out that the melt processability of the product characterizes the improved properties to which the claimed products are directed. *See*, *e.g.,* the "wire speed" and sparks failure/14 Km of Table 2 of the Specification. Moreover, for example, it is generally known that homopolymer PTFE cannot be melt processable, even though a DSC thermoanalysis provides a melting temperature T_m and crystallization temperature T_c of PTFE.

With respect to point 2(a) above, Applicants note that it is generally known that MFI depends on polymer viscosity, which, in turn, depends on polymer molecular weight. However, MFI does not inherently depend on the comonomers composition of the copolymer, as suggested in the Office Action. Rather, at a constant comonomer composition, Applicants submit it is possible to obtain a wide range of MFI by using chain transfer agents to regulate the molecular weight.

Additionally, Applicants note that the MPI is an essential property of the claimed copolymers, as recited in amended claim 1, which obviates the anticipation rejection.

With respect to point 2(b), Applicants note that the Specification, page 7, lines 4-8, states that, "[b]esides for the synthesis of said copolymers *in particular* a chain transfer agent is introduced so to regulate the polymer molecular weight, giving narrow molecular weight distributions." (emphasis added). *See*, ethane in the examples of a chain transfer agent. The use of the expression "in particular" suggests that the claimed copolymers can only be obtained by using chain transfer agents, and are thus, necessary for achieving the claimed MFI between 8-50.

In contrast, Pucciariello does not indicate a "particular" addition of chain transfer agents. Moreover, as previously pointed out by the Applicants, the addition of chain transfer agents would not be necessary to nor contemplated by Pucciariello since the thermoanalysis data of would not be affected by different MFI Values.

In light of the foregoing, Applicants respectfully request reconsideration and withdrawal of the anticipation rejection of claim 1.

Claims 2 and 6-7 are rejected under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103(a) as obvious over Pucciariello.

Applicants respectfully submit that claims 2 and 6-7 depend from claim 1. As previously noted, claim 1 should be allowable for the aforementioned reasons. As claim 1 overcomes the anticipation rejection, so do claims 2 and 6-7.

With respect to the obviousness rejection of claims 2 and 6-7, Applicants traverse the rejection for the reasons provided below.

Applicants point out that the copolymers of the present claims solve the technical problem of providing a fluorinated polymer for LAN cables having the combination of improved extrusion rate and electric insulation. Applicants submit that Pucciariello does not teach or suggest a solution to this technical problem.

Applicants further submit that one skilled in the art would not have found a teaching, suggestion, or motivation in Pucciariello that, among all the copolymers known in the art, only those satisfying the claimed conditions of FMVE composition and MFI would solve the above technical problem.

Applicants note that the thermoanalysis data in Pucciariello mainly depend on only comonomer compositions and do not inherently depend on MFI properties. Furthermore, Applicants note that Pucciariello deals with only thermoanalysis data. Therefore, Pucciariello does not provide any motivation to use chain transfer agents to regulate MFI of the obtained copolymers. Accordingly, without Pucciariello providing any motivation and disclosure, Applicants submit that Pucciariello would not have rendered obvious the presently claimed copolymers comprising end groups derived from the use of a chain transfer agent.

Applicants further point out that the Specification, page 9, lines 10-21, which refers to US SIR H130, discloses that, in the TFE/perfluoropropylvinylether copolymers, as melt viscosity is lowered, stress crack resistance is also lowered. Thus, in light of US

SIR H130, the use of a chain transfer agent is actually taught away from, i.e., contra-indicated, by the known prior art.

Pucciariello does not solve the present technical problem concerning copolymers endowed with a combination of improved properties of extrusion rate of sheaths for LAN cable and electric insulation. Moreover, in light of US SIR H130, one skilled in the art would not have been motivated to prepare a low viscosity copolymer TFE/FVE, i.e., having MFI higher than 8 up to 50 g/10 min, as presently claimed, since a low stress crack resistance would be expected.

In light of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2 and 6-7.

Claims 3-5 are rejected under 35 USC 103(a) as being unpatentable over Pucciariello in view of U.S. Patent No. 5,463,006 to Abulseme et al. ("Abulseme").

Applicants respectfully traverse the obviousness rejection. Applicants submit that Abulseme does not make up for the deficiencies of Pucciariello, as pointed out above.

Applicants note that the deficiencies and inapplicability of Abulseme an obviousness rejection were discussed in the Response of October 27, 2004. In that Response, Applicants showed that Abulseme teaches terpolymers, which cannot be compared with the presently claimed dipolymer, having clearly different mechanical and rheological properties. Furthermore, the only example in Abulseme that shows a dipolymer similar to dipolymers presently claimed is provided in Comparative Example 4. However, the Comparative Example shows that the dipolymer has worse mechanical

properties than the terpolymers. *See, e.g.,* the flex life in Table 1 of Abulseme. Consequently, Abulseme teaches away from using the presently claimed invention.

For at least the above reason, Applicants respectfully request reconsideration and withdrawal of the obviousness rejection of claims 3-5.

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of claims 1-7 and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 108910-00110**.

Respectfully submitted,

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